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**VON NORDENSKJÖLD, Reinhart**

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CLAIMS

- 10 1. Apparatus (1) for the anaerobic fermentation of materials (A, B) with  
a pre-acidifier (2) in which said materials (A, B) are subject to a pre-acidification,  
a fermenter (3a, 3b) in which said pre-acidified materials (A, B) ferment, and  
15 transport means (5a, 5b, 5c, 5d, 5e, 10, 11, 12, 14, 21) for transporting said materials (A, B) from said pre-acidifier (2) into said fermenter (3a, 3b),  
**characterized in that**  
20 said transport means (5a, 5b, 5c, 5d, 5e, 10, 11, 12, 14, 21) are formed to selectively transport sufficiently pre-acidified materials (A, B).
2. Apparatus (1) according to claim 1,  
25 **characterized in that**  
said transport means (5a, 5b, 5c, 14) comprise a withdrawal device (5a, 5b, 5c) for the withdrawal from the upper portion of said pre-acidifier (2), which are preferably formed by a spillway of said pre-acidifier (2)  
30 or by a withdrawal nozzle end arranged in the upper portion of said pre-acidifier (2).

3. Apparatus (1) according to claim 2,

**characterized in that**

5 said transport means (5a, 5b, 5c, 14) comprise a control device (14) for said withdrawal device, with which said withdrawal device (5a, 5b, 5c) and preferably an agitation device such as a stirrer (6, 7) can be driven.

10 4. Apparatus (1) according to claim 1 or 2,

**characterized in that**

said transport means (5b, 12) comprise a sieve (12).

5. Apparatus (1) according to claim 1,

15 **characterized in that**

said transport means (5d, 5e, 10, 11, 14, 21) comprise a floatation device (10, 11, 21) and a withdrawal device (5d, 5e) in the lower portion of said pre-acidifier (2).

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6. Apparatus (1) according to claim 5,

**characterized in that**

said transport means (5d, 5e, 10, 11, 14, 21) comprise a control device (14) for said withdrawal device  
25 (5d, 5e) with which said withdrawal device (5d, 5e) and preferably said floatation device (10, 11, 21) can be driven.

7. Apparatus (1) according to one of the claims 1 to 6,

30 **characterized in that**

a mechanical pre-treatment-pre-hackling-device 25 for solubilizing/hackling at least part of said materials (A, B) is provided.

8. Method for the anaerobic fermentation of materials (A, B) with

a pre-acidification at which said materials (A, B) are pre-acidified with a pre-acidifier (2),

5 a fermentation at which said pre-acidified materials (A, B) ferment in a fermenter (3a, 3b), and

a transport at which materials (A, B) from said pre-acidifier (2) are transported into said fermenter (3a, 3b),

10 **characterized in that**

said sufficiently pre-acidified materials are selectively transported.

9. Method according to claim 8,

15 **characterized in that**

the transport comprises letting said materials deposit themselves in said pre-acidifier (2) and a subsequent withdrawal of materials from an upper portion of said pre-acidifier (2).

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10. Method according to claim 8 or 9,

**characterized in that**

said materials are guided through a sieve (12) during the transport.

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11. Method according to claim 8,

**characterized in that**

the transport comprises a floatation and an at least partially simultaneous transport from the lower portion

30 of said pre-acidifier (2).

12. Method according to one of the claims 8 to 11,

**characterized in that**

35 said materials (A, B) comprise fluids (A) and solids (B).

13. Method according to one of the claims 8 to 12,  
**characterized in that**

at least part of said materials (A, B), particularly  
5 said solids (B) are pre-treated preferably mechanically  
pre-hackled before they are put into said pre-acidifier  
(2).